UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,625	09/04/2003	Frank Dawidowsky	282723US8X	7983

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EXAMINER
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ART UNIT	PAPER NUMBER
2619	

NOTIFICATION DATE	DELIVERY MODE
08/20/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*27 May 2008*</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-15* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

05/27/08 has been entered.

Response to Amendment

2.   The amendment filed on 05-27-2008 has been entered and considered.

Claims 1-15 are pending in this application.

Claims 1-15 remain rejected as discussed below.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9 and12-15 are rejected under 35 U.S.C. 112, first paragraph, as failing

to comply with the enablement requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to enable one skilled in the art to

which it pertains, or with which it is most nearly connected, to make and/or use the

invention.

The amended claims 1, 4 and 7 disclose that "said certain connection never using more than the allocated predetermined amount of bandwidth". However, the support of that limitation could not be found anywhere in the original disclosure. Moreover, the original specification only discloses how the unused bandwidth from a certain connection can be reallocated to another user to avoid wasting that unused bandwidth (see page 3 lines 10-27). Finally, the limitation contradicts with the objective of the invention that is reallocating or reassigning any unused or freed bandwidth of a user to a requester who's in need of more bandwidth.

Claims 2, 3, 5, 6, 8, 9 and 12-15 are rejected because of their dependency on the rejected claim.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorsuch et al (US 6,388,999), hereinafter referred to as Gorsuch in view of Lodha et al (US 2003/0223430), hereinafter referred to as Lodha and further in view of Benveniste (US 2002/0163933).

For claim 1, Gorsuch discloses a method to allocate bandwidth, which method is intended for a central controller of a network (see Figure 1 element 104), comprising the following steps allocating a predetermined amount of bandwidth to a certain connection

requiring a certain quality of service, said connection never using more than the

allocated predetermined amount of bandwidth (see column 6 lines 21-25; subscriber

101 is granted 20 of 64 channels to allow data rate of 160kbps), wherein an owner of

the certain connection is a requesting terminal which is a terminal of the network or the

central controller (see Figure 1, subscriber 101 requesting the bandwidth through the

reverse or backward communication channel).

Gorsuch discloses all the subject matter with the exception of freeing a certain amount

of the allocated predetermined amount of bandwidth, the certain amount being the

difference of the allocated predetermined amount of bandwidth and an indicated needed

amount of bandwidth indicated by the owner, wherein the indicated needed amount of

bandwidth does not exceed the predetermined amount of bandwidth and when the

owner indicates a new needed amount of bandwidth greater than said indicated needed

amount, immediately returning as much of the freed bandwidth as required, so that the

new needed amount of bandwidth is available to the owner. However, Lodha discloses

a method wherein freeing a certain amount of the allocated predetermined amount of

bandwidth, the certain amount being the difference of the allocated predetermined

amount of bandwidth and an indicated needed amount of bandwidth indicated by the

owner, wherein the indicated needed amount of bandwidth does not exceed the

predetermined amount of bandwidth (see Figure 4B step 406; the unused allocated

bandwidth) and when the owner indicates a new needed amount of bandwidth greater

than said indicated needed amount, immediately returning as much of the freed

bandwidth as required, so that the new needed amount of bandwidth is available to the

owner (see Figure 4B step 408; letting the second queue borrows the unused allocated

bandwidth of the first queue (the owner); inherently, burrowing the unused and getting it

back when needing it). Thus, it would have been obvious to the one skill in the art at

the time of the invention to use the burrowing method of Lodha of the unused bandwidth

into the method Gorsuch for the purpose of re-allocating unused bandwidth and

therefore increase the efficiency of the system. Gorsuch and Lodha disclose all the

subject matter with the exception wherein the network is an ad-hoc network. However,

Benveniste discloses that an ad-hoc network can be defined as the IEEE 801.11

wireless LAN network where the stations communicate directly with each other (see

[0033] lines 1-9). Thus, it would have been obvious to the one skill in the art at the time

of the invention to use the method of Gorsuch and Lodha in an ad-hoc network for the

purpose of having the advantage of adding quickly new devices and wherein the

devices can communicate with each other in a direct way without the need of access

point.

For claim 2, Lodha discloses a method characterized by allocating some or all of

the certain amount of freed bandwidth to a connection without quality of service

requirements (see Figure 4B step 408; letting the second queue borrows the unused

allocated bandwidth of the first queue (the owner)).

For claim 3, Gorsuch discloses a method wherein the requesting terminal is

operated by reserving a predetermined amount of bandwidth for providing a certain

quality of service for the connection (see column 6 lines 21-25; subscriber 101 is

granted 20 of 64 channels to allow data rate of 160kbps) and determining the filling

status of the transmit queue which indicates how much sending data is in the transmit

queue (see Figure 4 and column 8 lines 20-21; L thresholds are an indication of how

much data is currently stored in the buffer), determining a needed amount of bandwidth

as bandwidth needed in a next transmission frame, the needed amount of bandwidth

depending on the filling status of the transmit queue and not exceeding the

predetermined amount of bandwidth (see column 7 lines 7-13; a channel assignor

monitors buffer usage to determine an urgency characteristic of each subscriber unit in

order to dynamically assign an optimum number of channel resources to be allocated to

each subscriber unit), and indicating the needed amount of bandwidth to the central

controller (see column 8 lines 41-43; an urgency factor for each data source attempting

to transmit on the reverse links 111 and see Figure 1; wherein the reverse link is from

the subscriber unit to the base station).

Claim 4 is rejected for same reasons as claim 1 and 3.

Claim 5 is rejected for same reasons as claim 1.

For claims 6, 9, 11 and 12, Benveniste discloses that ETSI HIPERLAN/2 is the

European counterpart to the American 802.11a with QOS features (see [0017]). Thus it

would have been obvious to the ordinary skill in the art at the time of invention to modify

the network as taught by Gorsuch and Lodha to an ad hoc network operated according

to the ETSI HIPERLAN/2 standard for the purpose of the direct communication of the

terminals without a network controller or base station and using the ETSI HIPERLAN/2

standard so it can operate in Europe.

Claim 7 is rejected for same reasons as claim 1.

For claim 8, Gorsuch discloses a central controller characterized by a transmit queue for buffering sending data (see Figure 4 and column 8 lines 20-21; L thresholds are an indication of how much data is currently stored in the buffer), and a monitoring means for monitoring the filling status of the transmit queue and indicating the indicated needed amount of bandwidth, which depends on the filling status of the transmit queue, to the bandwidth freeing means or bandwidth re-allocations means (see column 7 lines 7-13; a channel assignor monitors buffer usage to determine an urgency characteristic of each subscriber unit in order to dynamically assign an optimum number of channel resources to be allocated to each subscriber unit).

For claim 10, Gorsuch discloses a requesting terminal of a network having a connection with other terminals of the network or with a central controller of the network (see Figure 1; wherein the subscribers 101-103 are in connection with the base station 104), the connection requiring a certain quality of service and therefore a predetermined allocated amount of bandwidth (see column 6 lines 21-25; subscriber 101 is granted 20 of 64 channels to allow data rate of 160kbps), the requesting terminal comprising: a transmit queue for buffering sending data (see Figure 4 and column 8 lines 20-21; L thresholds are an indication of how much data is currently stored in the buffer); a monitoring means for monitoring a filling status of the transmit queue and sending out a request signal to the central controller indicating a needed amount of bandwidth, which depends on the filling status (see column 7 lines 7-13; a channel assignor monitors buffer usage to determine an urgency characteristic of each subscriber unit in order to

dynamically assign an optimum number of channel resources to be allocated to each subscriber unit).

Gorsuch discloses all the subject matter with the exception of explicitly showing that the indicated needed amount of bandwidth does not exceed the predetermined allocated amount of bandwidth. However, Lodha discloses that the needed amount of bandwidth does not exceed the predetermined allocated amount of bandwidth (see Figure 4B step 406; the unused allocated bandwidth is the difference between the allocated bandwidth and the needed amount). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the burrowing method of Lodha of the unused bandwidth into the method Gorsuch for the purpose of re-allocating unused bandwidth and therefore increase the efficiency of the system.

Gorsuch and Lodha disclose all the subject matter with the exception wherein the network is an ad-hoc network. However, Benveniste discloses that an ad-hoc network can be defined as the IEEE 801.11 wireless LAN network where the stations communicate directly with each other (see [0033] lines 1-9). Thus, it would have been obvious to the one skill in the art at the time of the invention to use the method of Gorsuch and Lodha in an ad-hoc network for the purpose of having the advantage of adding quickly new devices.

For claim 13, Lodha discloses a method, wherein the allocated predetermined amount of bandwidth corresponds to a fixed reserved amount of bandwidth (see Figure 4B, step 406 or Figure 4A, step 402; Allocate bandwidth).

For claim 14, Lodha discloses a method wherein the allocated predetermined amount of bandwidth is allocated based on fixed capacity allocation (see Figure 4B, step 406 or Figure 4A, step 402; Allocate bandwidth).

For claim 15, Lodha discloses a method wherein the freed bandwidth is re-allocated in a next transmission frame (see Figure 4B, step 408; the allocation of the unused bandwidth is for the next transmission frame).

Response to Argument

5.   Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection (112, 1st and 2nd paragraph).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In regard of claims 1, 4 and 7, the applicant argued in page 9 of the Remarks that the teachings of the publication '430 is not correct in the context of requesting and using bandwidth. However, the applicant did not explain his side of argument and therefore lacks argument. Moreover, in regards of claims 1, 4, 7 and 10 and for the limitation "said indicated needed amount of bandwidth does not exceed said predetermined amount of bandwidth", the applicant is arguing a different Figure than the one used by the examiner and different figures can mean different embodiments. Furthermore, in page 10 of the Remarks, the applicant argued the term "immediately" in terms of immediate

bandwidth return. However, the feature of the limitation is clearly met by Lodha. Lodha

explicitly designates that the unused bandwidth is used by a borrower who borrows it

and person of ordinary skill in the art recognize the function of the borrowing since

borrow means to receive with the implied or expressed intention of returning the same

or an equivalent and to receive (something) from somebody temporarily, expecting to

return it (definition). Lodha does not choose to use his own lexicography to designate

the immediate reallocation of bandwidth. However, the steps performed by Lodha are

the same regardless to the terminology used.

In regards of claim 10, the argued limitation "said connection never using more

than the allocated predetermined amount of bandwidth" is not in the claim.

6.   Note: The newly added reference (Li et al "6,980,511") in the PTO-892

discloses a method of dynamic bandwidth assignment in a telecommunication network

similar to the claimed invention, especially in column 2 lines 29-47.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. See PTO-892..

8.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Hicham B. Foud whose telephone number is 571-270-
1463. The examiner can normally be reached on Monday - Friday 10-6 EST
        If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Chau T. Nguyen can be reached on 571-272-3126. The fax phone number
for the organization where this application or proceeding is assigned is 571-273-8300.
        Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
Status information for unpublished applications is available through Private PAIR only.
For more information about the PAIR system, see http://pair-direct.uspto.gov. Should
you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hicham Foud
08/08/2008

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